

COMMITTEE ON EXPANDING WATER RECLAMATION AND REUSE IN VIRGINIA

MEETING NOTES - FINAL COMMITTEE MEETING – TUESDAY, AUGUST 9, 2011 DEQ PIEDMONT REGIONAL OFFICE TRAINING ROOM

Meeting Attendees

| <i>COMMITTEE MEMBERS</i> | <i>COMMITTEE TECHNICAL SUPPORT</i> | <i>INTERESTED PUBLIC</i> |
|---|------------------------------------|---|
| Leita Bennett - ATKINS | Melanie Davenport - DEQ | Patrick Haney – Arcadis/Malcolm Pirnie |
| Lawrence (Larry) Dame – New Kent County | Bob Hicks - VDH | Mark Williams – Luck Stone |
| Gregory (Greg) K. Evanylo – Virginia Tech (Technical Expert) | Wes Kleene - VDH | Brent Waters – Golder Associates |
| Eldon James – Rappahannock River Basin Commission | Allen Knapp - VDH | Gregory (Greg) J. Prelewicz – Fairfax Water |
| Larry Land – Virginia Association of Counties | Tim Sexton - DCR | Gina Shaw – Norfolk Utilities |
| Vernon Land – Hampton Roads Planning District Commission (Alternate for Eric Tucker) | Ved Malhotra - DCR | |
| Joe Lerch – Virginia Municipal League | Scott Kudlas - DEQ | |
| Peter McDonough – Golf Course Superintendents Association | John Kennedy – DEQ | |
| Jim Pletl – Hampton Roads Sanitation District | Allan Brockenbrough - DEQ | |
| Peggy Sanner – Chesapeake Bay Foundation (Alternate for Ann Jennings) | Jeff Reynolds - DEQ | |
| Jim Sizemore – Alexandria Sanitation Authority (Alternate for Karen Pallansch) | Neil Zahradka – DEQ | |
| Cabell Vest – Virginia Association of Municipal Wastewater Agencies, Inc. – Alternate for Robert C. Steidel | Angela Neilan – DEQ | |
| Andrea Wortzel – Mission H2O | Valerie Rourke - DEQ | |

NOTE: The following Committee members were absent from the meeting: Thomas (Tom) J. Grizzard – Virginia Tech and Upper Occoquan Laboratory; Michael Collins – CONSERV; Nathan Lott – Virginia Conservation Network; Lewis Lawrence – Middle Peninsula Planning District Commission; Mark Haley – Virginia Nutrient Credit Exchange Association; Shahram Mohsenin - Fairfax County DPWES; and Brooks Smith – Virginia Manufacturers Association.

The meeting was convened at 9:30 a.m.

Neil Zahradka, Manager of the Office of Land Application Programs, welcomed the group. Members of the group were then asked to introduce themselves and indicate the organization that they represented.

Valerie Rourke presented background information on the current regulatory action to amend the Water Reclamation and Reuse Regulation and the basis for DEQ and VDH convening this committee (i.e., 2011 Appropriations Act (VDH, Item 290), letter from Delegate Harvey Morgan, and SB 1427 regarding the development of water reuse project criteria for WQIF). Valerie also reviewed the tentative milestones and completion schedule for a report on expanding water reclamation and reuse in Virginia to be prepared jointly by DEQ and VDH.

Angela Neilan asked the committee to focus on ideas to incentivize water reclamation and reuse. She asked committee members in turn to respond with their ideas. Ideas and suggestions offered by the committee were listed as bulleted items on large post-it sheets and hung on the walls.

Scott Kudlas: We have some water resources challenges with respect to a sustainable supply.

John Kennedy: Reuse is a pragmatic necessity, rather than something that needs incentivizing. It allows growth to occur without increasing nutrient loads. It does not usually show up, however, as a cost effective alternative in many cases.

Allen Brockenbrough: Nutrient caps are a pretty good incentive, but reuse is expensive. There are some financial opportunities that could be explored.

Committee:

Storage facilities need to be allowed in a way that can be used by the end users. The existing regulations need to address this.

Sustainability is a key issue.

The onsite sewage system program is investigating incentives to expand of onsite water reuse.

Reduce regulatory limits on permitted irrigated application rates and consider use of water with higher nutrient levels for irrigation.

Financial incentives are important. Creating a demand for reuse is important.

Each project must be evaluated to see whether or not it reaches the goals. It is important to examine each project being incentivized to see if it actually achieves the goal. Instream impacts must be accounted for to ensure that we don't impact beneficial uses.

Reuse should be a cost effective component to generate nutrient credits.

Reuse of wastewater from storm water needs to be examined in addition to reuse of wastewater. There may be limits in the building code for using rainwater for flushing toilets.

Regarding irrigation rates, soil moisture gauges should be used to measure and determine if the reclaimed water application amount is correct. Application rates should be based on temporal and site specific conditions.

Raising the price of drinking water will increase the demand for reclaimed water.

Flexibility in implementation of reuse projects needs to be included.

There must be a partnership between the end-users and the providers. Costs are a considerable factor in the equation. The politicians need to be sold on the value of reclamation so that tax

incentives could be generated. If there is money to be retrieved through tax credits by the end user who is paying for the product, its use may be incentivized.

Public education is important. People must understand the benefits of reuse. The process so far has not given the public a comfortable feeling about reused water. A public education campaign on the part of the state would be beneficial.

Reclamation techniques should not impair nutrient reduction goals. The simple rain barrel is an extremely cost-effective method (i.e. there is a broad scale of projects – simple to complex).

Engineers and designers must be educated as to advantages of reuse. The engineering societies are a vehicle and audience that could be utilized.

DCR's new stormwater regulations encourage harvesting of storm water. Credit for rainfall harvesting is given. An educated engineer can design a project that makes reuse viable. Volume reduction credits are important. Reducing the volume of flow generates credit for the project. Virginia gets high amounts of rainfall compared to other states. The non-potable nature of reuse must be kept front and center.

Prolonging and optimizing reuse is important (sustainability). We don't charge enough for water. In-stream flow issues are critical.

Operation and maintenance costs are significant, but there is no incentive available for those long-term costs. Existing cost-share is focused solely on capital costs.

We must have a greater emphasis on wastewater application in our nutrient management programs.

Groundwater recharge issues need to be resolved.

There are carrots and sticks that can be incentives. Other states that have active reuse programs are heavy on regulation. Possibly consider an adequate public facilities concept (no statute requiring this in Virginia). Perhaps there needs to be a statute that ensures a sustainable water source available prior to new development. Reuse is harder to retrofit than to be considered from the outset.

Legislators want to explore the actual benefit of a tax credit. Tax credits are a hit on the general fund, and when money is being rerouted from other projects, the benefit must be there.

Localities should be looking at water supply on a regional level.

It is practical to apply sludge and wastewater to the same field. A single permit should be used to allow both.

There is much enthusiasm interest in the use of gray water. A building owner can offset the cost of an onsite system by reducing volume and using gray water. However, there are public health risks involved with using gray water and there are challenges that must be overcome. New South Wales (Australia) has a regulation that allows gray water use through a permit-by-rule situation where rules are set and no permit is needed as long as guidelines are followed. Some methods of gray water recycle and reuse are very primitive, such as manual bucketing to collect shower water for subsequent garden watering. Rules apply to educate public as to limitations (not using water in contact with sick residents, diapers, etc.) Some simple mechanisms and low tech alternatives can be used, but public health protection must be considered.

There must be end-users (i.e., a customer) for reuse to work. Education is key to demand. Golf courses are using groundwater to supply irrigation water when there are a number of local wastewater treatment plants that could supply reclaimed water for irrigation. There could be limitations on using potable groundwater when reclaimed water is available. The end-users must be brought on board.

The state fresh water management plan should look at where water needs are, getting water to where it needs to be and restoring original flows of water bodies.

With respect to anticipating water needs in advance of development, a developer should be looking at ways to offset local water demands with reclaimed water. Certain operations will have a greater water demand and should be required to offset their impact for future demands to achieve sustainability.

Nutrient content of wastewater is not aligned with crop needs. A treatment plant works to reduce nutrients and the design is focused on that goal. The incentive can be that treatment requirements are reduced if the end use is supplying crop needs.

Public health risks are important to consider. If good ideas are generated by this report, we need to be able to react to the exposure risk associated with each use, i.e. identify an acceptable risk vs. not.

Other states have been using reclaimed water for years with no health impacts.

Groundwater recharge is a bigger issue that includes groundwater standards and the agency will be coming back to the issue.

Virginia is a riparian state. The conservation aspect is important to include a watershed based approach. Whatever incentives we come up with, we need to address impacts on a large scale.

If there is no way for parks, athletic field, etc. to address public distrust of practice, the demand won't be there. The fear factor must be removed as a hurdle. Otherwise, there won't be new end-users.

Everyone must work together to promote the practice. Collaboration between entities is important. Fear killed a simple project.

Encourage or subsidize agricultural use irrigation reuse of reclaimed water. Agriculture is considered the greatest input to non-point source pollution. Greatest nutrient losses to groundwater occur as a result of drought when crops are not taking up nutrients. Irrigation water that reduces drought impact to groundwater would reduce applied nutrient loss.

Reduce permit fees, streamline processing and permitting timeline, and reduce monitoring and reporting requirements.

Comparing all rules against risk (existing and proposed) is important. The word "sustainability" should not be used in the report. The word is turning into a negative term of art.

Credit for the environmental benefit of reuse is important, but there are other benefits. You are meeting limits, but if you are going above and beyond, then offering a credit to the dischargers could provide incentive.

Many Home Owners Associations don't allow rain barrels. This is an impediment that should be removed.

The affect of climate change needs to be addressed. Sea level rise and salt water intrusion into potable aquifers is an issue that must be considered.

There is a geologic process that is happening in Virginia unrelated to greenhouse gases. Sea level rise is a way to address geologic issue rather than using the term climate change and associated debate.

There needs to be greater coordination between VDH and DEQ regarding groundwater withdrawals and affected localities should be involved in this coordination.

Conditions of New Kent County's groundwater withdrawal permit issued by DEQ strongly encouraged the county not to allow any new private wells within the county's service area and required the county to put this in their ordinance. However, a private citizen that was denied a permit for a private well from the county was able to get a private well permit from VDH. This illustrates that lack of coordination that exists between DEQ and VDH. This could become a particularly significant problem if/when DEQ permits groundwater recharge with reclaimed water.

Georgia has an informational document available that could be a good resource for the educational component of promoting reuse.

It would be meaningful to have the Governor's approval of water reclamation and reuse. A high-level endorsement is key to acceptance. This would help with education.

An adequate public facilities analysis is important. Anything perceived as limiting growth will generate a negative reaction from Tea Party activists, regardless of stigma on word "sustainability".

We should do our best to not allow fear to drive policy. Make science basis for change.

Describe things specifically versus using jargon in order to make points clear.

An example of something done right is at the Western Virginia Regional Jail where rainwater is collected from the roof with a vacuum system, used for laundry and captured again before it goes to a wastewater treatment system. The facility saves approximately five million gallons per year. The water is used three times. Case studies like this are a good way to illustrate how rainwater can be collected and used.

Some legislators may be looking at water reclamation and reuse as a panacea, and the checks and balances must be brought to light.

It is a broader question rather than just nutrient reduction, and the legislature is becoming more educated.

Education programs from state agencies are important. The Virginia Cooperative Extension reaches more people than any other. Use this resource.

Acceptance of the reclaimed water requires it be "clean" in some respects. Use of pharmaceuticals and personal care products (PPCPs) must be addressed. Drug collection programs must work in sync with promotional efforts to reduce the presence of PPCPs in wastewater.

Mechanisms to incentivize will require money to fund.

OPEN CHAIR:

Patrick Haney (Arcadis/Malcolm Pirnie) – There is a demand from the end-users, engineers can find a way to get the water to them. Reduced taxes on developers will get people to use reclaimed water. A reduced water rate and a tax incentive will get people to hook up to system. In Arizona there was a requirement for a 100 year water supply use plan for new development. If you want people to use reclaimed water, require them to. Educate the public as to what water is, not just reclaimed water.

Does tax credit in Arizona give a schedule of eligible practices/equipment or does the developer apply with a list? Patrick was not sure.

Pete Mansfield (Supervisor in Middlesex County) – I am very interested in reuse water and have met with DEQ staff. One of the biggest hindrances is DEQ. There should be alternatives to requirements for storage that allow discharge during certain times and reuse during others. You can only irrigate eight months and then you must store wastewater four months (storage for one third of the year). You should be able to discharge nutrients in the winter when it will have the least impact on the Chesapeake Bay. Over half the nutrients in the James River come from wastewater treatment facilities. We should consider what Florida and Georgia are doing. These issues are already taken care of in those states. Manatee County, Florida reduced the amount of nutrients going into the Gulf of Mexico by a half million pounds per year at a cost of \$10 per pound of nutrients. HRSD is going to spend \$150-\$350 per pound of nutrients reduced.

Brent Waters (hydrogeologist, Golder Associates) – I am involved with rapid infiltration basin on the Eastern Shore of Virginia. With shellfish habitats, you cannot discharge. The water must be used for irrigation or put into septage lagoons (with environmental detriment). Rapid infiltration basins can be mechanism to recharge groundwater. Recharging groundwater with highly treated effluent would provide base flow back to surface waters.

Angela Neilan initiated a break to organize and categorize bullet items. After the break, Angela gave each committee member four dots and requested that they place one or more dots beside items they believed to be priorities. The initial categories and the number of dots per category are shown below (see Attachment A of these notes for a list of items in each category and the final number of dots or priority points given by the committee to various items by the conclusion of the meeting).

Category: Votes

Laws and Regulations: 17

Groundwater: 6

Public Health: 7

Financial: 11

Irrigation: 8

End Users: 11

Education: 8

General: 0

Other Factors and Incentives: 7

Meeting reconvened @ 12:45.

Angela Neilan reviewed the results to prioritize the bullets and noted that three categories, Laws and Regulations, Financial, and End-Users, received the most votes. The committee agreed to start the afternoon discussion with End-Users.

What are the factors that identify or exclude particular end-users? Is it an infrastructure issue related to getting the reclaimed water to them?

There is a 10-foot separation distance between water and wastewater mains, which creates problems when obtaining easements. Reworking roads to address lack of easements can be a limitation. Identification of large end-users is important. Extending distribution system to reach additional users may be inhibited by being able to maintain monitoring/compliance of water quality in additional length of pipeline (unsure of impact).

A groundwater limited area will have more potential end-users asking for reclaimed water. Availability of cheap water will affect demand.

Golf courses that have long-standing access to groundwater will not be looking to hook up to reclaimed water that they must pay for.

TMDL requirements may become trigger to force change at water purveyors, i.e. requiring that reclaimed water be used instead of groundwater, forcing local leaders to invest in these projects.

Stimulus money was the only reason one particular project came to be. The water purveyor paid for the design cost, and the vote to build it with stimulus money was still 4:1. There is a long process to get politicians to buy into water reclamation and reuse.

These projects are not cheap .

How are rates set for reclaimed water?

We started at \$2.52 and ended negotiations at \$0.75. The negotiations involved an 18 month process and were complex. This included the involvement of DEQ Water Supply staff regarding groundwater permitting.

The county has to convince the voters that this is a good thing.

Agricultural interests are not represented on the committee.

Farm Bureau can't speak for the turf industry.

Phase II TMDL process explanations by DCR presented a suite of options to meet target load. Options involving water may be expensive to implement.

Some agricultural interests in another project were limited by proximity of farmland to source of water.

Animal agriculture could be a potential user of reclaimed water as an alternative to groundwater.

Non-potable industrial uses could be particularly large consumptive uses of reclaimed water.

Why are there so few users of reclaimed water for irrigation?

Cost is an issue. Revenue loss from sale of potable water can be an issue for cities.

When the water purveyor and sewer provider are the same entity, the solution is easier. That is not always the case. In the case where the water purveyor is an authority, they may end up working against the locality to incentivize reuse.

The purpose or driver for this incentivizing effort is focused on reducing discharges to groundwater, but conversation from committee is focusing on groundwater supply and interactions. Demand for reclaimed water could easily be enhanced by additional permitting requirements for groundwater withdrawals.

Waste load allocation limitations drive reclamation and reuse because it allows expansion and growth without an additional allocation. The conservation of groundwater is a result.

Education for water conservation is easier in Arizona because of climate.

How do we use the TMDL requirements to drive reuse?

The TMDL nutrient management issues are important. Conservation of nutrients is key to equation. Use of all sources (reclaimed water, poultry litter, etc.) needs to address net reduction in excess nutrient loss.

Full cost pricing of potable water needs to be considered in the equation.

The locality should break even in their budgets, and water and sewer rates may be high in order to do that.

Low nutrient reclaimed water will not replace high nutrient sources for fertilization. Reclaimed water is valuable as an irrigation source.

When we look at solutions, encouraging incentives should take priority, i.e. no additional regulation.

Bullet item “value of assimilative capacity/value of project” is an issue that got a lot of priority dots but was spread out. A new category, Water balance, was created. Three bulled items with nine dots or priority points were moved into this category from other categories.

The value may not be monetary, but there is value in holding on to water supply.

Georgia and Florida regulations make it difficult to make water withdrawals. Those programs did not develop in a vacuum. There were caps on withdrawals. In order to grow, they must be efficient with their water use.

The Georgia and Florida policies have resulted in fewer withdrawals. There are fewer downstream users in those states, so there are fewer impacts. The ratio of groundwater to surface water usage is 80/20 in Georgia and Florida, and 20/80 in Virginia.

It may be that storm water reuse vs. wastewater reuse incentives are different, as impact of use of one versus the other should be examined.

Risk Basis and Health Issues:

Is there an expectation that the risk assessment associated with Florida’s or Georgia’s practices would be considered in this report? The timeline doesn’t appear to allow that.

The risk of existing reuse does not need to be revisited, but if we incentivize, we would need to keep those risks in mind. Groundwater recharge would involve additional questions regarding risk.

Incentivizing by relaxing regulatory requirements would necessitate a re-examination of risk.

Financial Issues

Angela Neilan reviewed the issues noted by the committee regarding financial issues.

Free reclaimed water would incentivize use.

A financial incentive should not be raise the cost of something else to make reclaimed water competitive. If reclaimed water use will become commonplace, it will not be because of a financial incentive to use it. There must be other practical reasons to use reclaimed water.

A tax credit for use will be more palatable to the locality than providing the product for no cost.

An analogy with biosolids: The cost of biosolids land application is cheaper than landfilling. Cost is offset. If each pound of nutrient discharged incurred a cost to the locality, reclaimed water nutrients used a fertilizer could be viewed as a savings.

Georgia bought back grandfathered water rights. Virginia could buy back the water rights and then let them use that money to use reclaimed water.

Reducing taxes on purple pipe for reclaimed water distribution would help.

DEQ guidance identifies water reclamation and reuse equipment as pollution control equipment that can be certified for a tax exemption.

Tax breaks that diminish over time, with a sunset period (phase-out tax incentive) sound incentivize without being a long term cost.

Higher credit trading ratios for reductions obtained from reuse projects could be an option.

The current nutrient trading policy does not distinguish between reductions gained through reuse or any other means.

Potable water as a commodity is very cheap, and increasing the cost could be reasonable. In other parts of the world, and even in other U.S. states, potable water is more conserved than in Virginia.

The issue of water as a finite commodity is not the problem focus today. The focus today is on nutrient reduction, but conservation is important.

OPEN CHAIR:

Patrick Haney (Arcadis/Malcolm Pirnie) - Should be a consideration for the cost of production. No one should be losing money over the production of water. Incentives should consider various conditions across the state.

Greg Prelewicz – Fairfax Water – A regional approach should be used to address fair pricing of sale of consumptive uses.

Irrigation issues:

The method in which the rates of irrigation are determined were a point of debate in the original development of the water reuse regulations. The method by which the rates are determined are cryptic in the regulation.

The regulatory rate determination is written to allow for flexibility based on site specific conditions.

The nutrient content of the water should determine whether nutrient management or irrigation management is appropriate. The limits on the use of low nutrient water should be removed.

WQIF criteria:

John Kennedy reviewed the directive of SB1427 regarding the development of water reuse project criteria for WQIF, and noted that including this item in discussions with the committee was an efficient way to piggy-back related discussions on expanding water reclamation and reuse in Virginia. There are limitations as to what the WQIF fund can provide based on pre-existing condition requirements. A limited number of treatment works – POTWs, geographic limitations. There are 57 signed grant agreements and there is a shortfall in being able to meet all commitments. The shortfall is growing. There was an attempt to address this in the 2011 General Assembly, but did not make it out of committee. Any surplus will be split between DCR and DEQ. DEQ already defines water reclamation and reuse as nutrient removal technology, and has funded it as such. In order to incentivize reclamation and reuse through financial grants, it runs contrary to current policy. Every grantee is required to go through cost-effectiveness, and if reclamation and reuse is cost-effective, DEQ will fund it. A percentage incentive is applied based on degree project assists with nutrient reduction. For reclamation and reuse projects, this may vary depending upon the degree the reclamation and reuse portion of the project contributes to the nutrient reduction goals. Distribution systems would not be cost-shared under grant program.

DEQ is mandated to make cost effective use of WQIF funds, but does not dictate which nutrient removal technology is used. The least cost alternative is usually the best application. If we incentivize reuse projects, this may give preferential treatment to a project that may be less cost-effective.

Water reclamation and reuse is eligible as nutrient removal technology. Is it included in guidance? Although not in the Secretary of Natural Resources' WQIF grant guidelines, DEQ's internal agency guidance contains information about the eligibility of water reclamation and reuse for WQIF grants.

Waste load allocation and caps will be a technological driver for reclamation and reuse.

Committee response:

The information John presented would be valuable for legislators to hear.

The fix to the internal guidance meets a need, and the close in the gap in the funding will come with time.

Is there any reaction to the current policy on eligible components of reuse project (i.e. what is necessary to install on-site, excluding the distribution system)?

Committee response:

If reuse is about end-user, shouldn't there be additional consideration for distribution systems?

There was a discussion of the funding of the Schaeffer project, \$2.8M for irrigation project.

There was a discussion of the portion of the funding that goes to DCR and how that funding is spent. Emphasis is on five priority practices for reduction of nonpoint sources.

Is there opportunity for DEQ and DCR to work together to address reuse projects that address non-point source reductions?

John Kennedy: DEQ will likely recommend continued use of the 75% factor, and may include a recommendation that the distribution system could be considered part of the eligible scope.

Laws and Regulations:

Angela Neilan reviewed the committee observations related to laws and regulations.

Relationship to building code was the impetus for the comment on synchronization with other sections of Virginia Administrative Code.

Georgia changed building code to address reuse.

Proposed change to DEQ's Water Reclamation and Reuse Regulation addresses use of reclaimed water for flushing toilets in certain situations.

There are limitations in building code that restrict storage of harvested rainwater. This is planned to be addressed in future regulatory action.

More coordination regarding groundwater withdrawal permits should be listed under laws and regulations rather than groundwater section. This is a significant area that needs research.

The VDH well construction permitting regulation is not slated for being opened soon, but is on the standard schedule for regulatory review.

There are opportunities to improve the consistency with water withdrawal regulations and individual withdrawal permits.

Regulations regarding storage limits affect the ability to use reclaimed water at golf courses.

The demonstration of long term adequate public supply could be required in Code. This discussion has occurred in the legislature in the past, and is a recurring issue.

Will DEQ make a recommendation as to what incentives should be examined, or produce a laundry list of options?

The request points more toward a list of options rather than making recommendations.

The legislature will likely ask for further technical analysis of certain options.

A review of the Water Supply Planning Regulation should be included in the list of options.

Is an end user's storage facility for reclaimed water eligible for WQIF? No, but it would be eligible if a storage facility were located at the WWTP/reclamation system.

An amendment to the code could require consideration of water reclamation and reuse in their long term water supply plan.

This is more likely to be addressed in the Capital Improvements Program (CIP) rather than the water supply plan. Either one could work. The CIP would seem to be the place to put this requirement.

Are there equity issues associated with distribution of the use of reclaimed water? There is an entitlement mentality when a sewer passes by property in that the right to use is there, but mandates to connect are not as well received. Will there eventually be issues with who gets the water (i.e. the farmer to grow food vs. the golf course)?

On the distribution side, there is the proffer component.

There is a lot of potential with storm water reuse. What are the opportunities?

There is a need to distinguish between the two types of wastewater (sewage and stormwater), and recognize that the opportunities are different.

Education is a good thing. Some of this is for the public, end-users, as well as decision makers.

Public Comment:

There was no public comment

Wrap-up

Valerie Rourke noted that a draft of the report will be provided to the committee by 8/23 and the agencies look forward to the committee's comments by 8/30. Valerie thanked the committee for their input.

The committee was adjourned at approximately 3:30 p.m.

Attachment A

Potential Opportunities to Expand Water Reclamation and Reuse Identified by the Stakeholder Committee

August 9, 2011

1. Laws and Regulations (17 priority points)*

- Consider other states' regulations (i.e. Florida) (5)
- Look at other sections Virginia Code (3)
- Look at reclamation and reuse for stormwater (2)
- Storage is an issue (2)
- HOAs don't allow rain barrels; resolve this barrier (1)
- How will TMDL be met? (1)
- Use same sites for reclaimed water and biosolids application (1)
- Decrease permit fees, monitoring and reporting; streamline permitting time
- Let policymakers decide how to incentivize reclamation and reuse
- Limits in USBC for reuse of stormwater in homes and commercial buildings
- LEED vs. Code
- Initiative for water R/R (rain barrels)
- Think about need for water reclamation as part of planning & development
- Regional incentives related to water supply
- Eliminate storage requirements (seasonal storage) - document why it is needed

2. Groundwater (6 priority points)

- Resolve groundwater recharge issues (6)
- Need more coordination between VDH and DEQ on groundwater withdrawals
- Groundwater recharge provides base flow for some surface waters
- Groundwater recharge to be revisited by DEQ
- Reclaimed water needed for groundwater recharge to stop salt water intrusion

3. Water Balance (9 priority points)

- Need to do watershed approach when considering water reclamation and reuse. This should include a mass balance. (5)
- Look at projects as a whole to meet goals and look at in-stream impacts (2)
- Need a state fresh water management plan (2)

4. **Public Health** (7 priority points)

- Identify public health risks of water reclamation and reuse (all types of reclaimed water) (4)
- Need risk based decision process when evaluating impacts to public health (3)
- Grey water reuse – public health risks
- Permit by rule for grey water – determined by quality of grey water
- Recycling can be simple for onsite use (low tech, but manage health risks)
- Look at existing/proposed regulations – public health risks with increased reuse

5. **Financial** (11 priority points)*

- End user must buy into this – provide tax incentives and tax credits (6)
- Water supply and nutrient caps driving reuse – link funding to this (3)
- State does not have money for operation and maintenance costs (1)
- Give credit to environmental benefits for wastewater treatment plants that reduce discharge due to water reclamation and reuse
- (Sticky note attached: Money is always an issue. PSAs and utilities required to operate in the black. County must operate in red. They do not charge enough to cover water costs. Do not charge enough for distribution to cover maintenance costs.)
- Localities need to be creative about costs/pricing
- Raise price of drinking water
- Not always most cost effective
- Cost effective component to generate nutrient credits
- Funding needed and monetary incentives
- How will costs /prices be set?
- What is actual benefit of tax credits?

6. **Education** (8 priority points)*

- Do more to educate public (by state) (5)
- Work with engineering groups to promote water reclamation and reuse (1)
- Develop public education information (brochures, etc.) to promote water reclamation and reuse (1)
- Include Coop Extension in public education.
- Need to eliminate “fear factor” of water reclamation and reuse – need to educate
- Need public support
- Need Governor’s endorsement

7. **End Users** (11 priority points)*

- Must have end users – need market and this needs education (6)
- Necessity versus incentivize – water reclamation and reuse allows growth to occur (1)
- Need to consider for water supply (1)
- Create demand for reuse (1)
- Need end users –eliminate sales tax for infrastructure, provide tax credit, reduce rate, need to demonstrate long-term water supply ; water reclamation and reuse should be a component “water use wisely”, a public educational tool
- Look at industries that have year round use – incentivize this
- Flexibility in implementation

8. Irrigation (8 priority points)

- Reduce permitted limitations on irrigation rates and consider use of reclaimed water with higher nutrient levels (3)
- Use soil moisture gauges for irrigation reuse (2)
- Encourage or subsidize irrigation use for agriculture - more efficient nutrient uptake, particularly during or after drought (2)
- Don’t over treat wastewater – make more nutrients available for irrigation reuse (1)
- Nutrient management programs need to address irrigation reuse

9. General (0 priority points)

- Promote drug collection programs to reduce CECs at source
- Require certain operations to do water reuse
- Should use reclaimed water rather than groundwater when available
- Need regulatory change for water supply that puts water reclamation and reuse as a higher priority

10. Other Factors and Incentives (2 priority points)

- LID (Low Impact Development) practices give credit for stormwater harvesting (DCR) (credit for volume reduction and pollutants) (1)
- Credits are available through LEEDS (1)
- Sustainability needed
- Avoid Jargon such as “sustainability” - don’t use “sustainability” in report

* The category received priority points in addition to individual items within the category